

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-307284

(43)Date of publication of application : 02.11.2000

(51)Int.Cl.

H05K 7/20  
H01L 23/473

(21)Application number : 11-109939

(71)Applicant : ADVANTEST CORP

(22)Date of filing : 16.04.1999

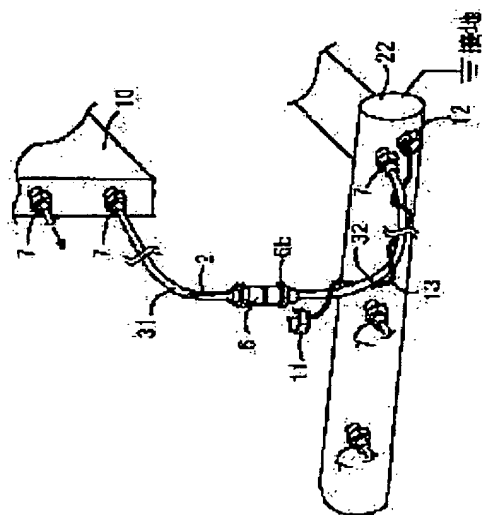
(72)Inventor : NAITO TAKASHI

## (54) COOLING APPARATUS FOR ELECTRONIC DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To cancel the generation of electrostatic spark caused by static electricity on a joint, by providing a metallic joint on an insulating piping and by providing a grounding means for the joint for discharging the static electricity being charged in the metallic joint when a metallic joint is provided in the middle of an insulation pipe.

SOLUTION: A grounding means for a joint is composed of fitting clips 11, 12 and a grounding/connecting line 13. Of the fitting clips 11, 12, one fitting clip 11 has a clip-shape corresponding to a shape of a section of a hexagonal nut shape 6b, one face of a hexagonal surface is cut off to make a shape for being mountable from the side of a coupler 6. Moreover, hook parts 11c which are not deviated from the hexagonal nut shape 6b is formed is formed upper and lower sides, and the fitting clip 11 is fitted and fixed from the side of the hexagonal nut shape 6b. Then, a grounding line 13 is connected to an end of the fitting clip 11, and static electricity which is charged on the coupler 6 is discharged through a branching unit 22.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's

decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office





